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(54) Title: METHOD USING PARTICULATE CHELATES TO STIMULATE PRODUCTION OF PETROLEUM IN CARBONATE FORMATIONS

(57) Abstract: A method and composition for stimulating petroleum production from carbonate reservoirs by employing chelating agents, such as EDTA, which are in particulate form rather than aqueous solutions of chelating agents. The use of particulate chelants, which are relatively unstable in acidic solutions, results in a stimulation fluid with a very high dissolution capability.



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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/36906

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : C09K 7/02, 3/00; E21B 43/16

US CL : 166/307; 507/203, 241, 902

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 166/307; 507/203, 241, 902

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,394,185 B1 (CONSTIEN) 28 May 2002 (28.05.2002), column 6, lines 20-41, column 3, lines 19-22, column 11, lines 1-40.	1-3, 6, 8
X	US 5,846,922 A (LAGNEMO et al) 08 December 1998 (08.12.1998), column 3, line 62 - column 4, line 2 and Example 1.	1-3, 5, 6
X	US 5,225,087 A (KARDOS) 06 July 1993 (06.07.1993), see Examples and column 5, lines 26-33	1-4, 6, 8, 9

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.**\* Special categories of cited documents:****"A"** document defining the general state of the art which is not considered to be of particular relevance**"E"** earlier application or patent published on or after the international filing date**"I"** document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)**"O"** document referring to an oral disclosure, use, exhibition or other means**"P"** document published prior to the international filing date but later than the priority date claimed**"T"**

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

**"X"**

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

**"Y"**

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

**"&"**

document member of the same patent family

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**INTERNATIONAL SEARCH REPORT**

PCT/US03/36906

**Continuation of B. FIELDS SEARCHED Item 3:**

**EAST, DERWENT**

search terms: chelant, chelating agent, particle, particulate, EDTA, HEIDA, DTPA, CDTA.